

# LONDON- WEST MIDLANDS ENVIRONMENTAL STATEMENT

## Volume 5 | Technical Appendices

CFA2 | Camden Town and HS1 Link  
**Baseline (SV-002-002)**  
Sound, noise and vibration

November 2013

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## Department for Transport

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# 1 Introduction

## 1.1 Structure of the sound, noise and vibration appendices

- 1.1.1 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (Volume 5: Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas (CFA).
- 1.1.2 For the Camden Town and HS1 Link area, the other three sections are as follows:
- baseline sound, noise and vibration (Volume 5: Appendix SV-002-002) (this appendix);
  - construction sound, noise and vibration (Volume 5: Appendix SV-003-002); and
  - operational sound, noise and vibration (Volume 5: Appendix SV-004-002).
- 1.1.3 Maps referred to within this appendix are contained in the Volume 5, Sound, Noise and Vibration Map Book.
- 1.1.4 This appendix includes details of the existing and future baseline sound environment within the area. It provides details of measurements and any other data collection which has been undertaken in order to obtain existing and future baseline sound levels.

## 1.2 Existing acoustic environment

- 1.2.1 The existing baseline sound environment for this area is typical for a central London urban environment with significant contributions from the existing rail sources and roads, notably the A502 Chalk Farm Road/Camden High Street, the A400 Kentish Town Road, the A503 Royal College Street and the A5202 St Pancras Way.
- 1.2.2 As with the majority of central London, even on less-frequented side roads there is a fairly constant level of sound from road traffic, which means that baseline levels tend to remain relatively high in most locations. Sound levels are typically high at receptors located close to busy roads, where daytime sound levels are typically around 70dB<sup>1</sup>, however, due to the screening provided by buildings and other obstacles sound levels are typically around 10dB lower on side roads away from main traffic routes.
- 1.2.3 Night-time sound levels in this area are typically 3 to 4dB<sup>2</sup> lower than those during the day in locations where the sound environment is dominated by busy main roads; and 5 to 7dB lower in locations away from the main roads.

<sup>1</sup> Quoted dB values at residential areas refer to the free-field 16 hour daytime (07:00 to 23:00) equivalent continuous sound pressure level,  $L_{pAeq,16hr}$ .

<sup>2</sup> Night-time sound levels refer to the free-field 8 hour night-time (23:00 to 07:00) equivalent continuous sound pressure level,  $L_{pAeq,8hr}$ .

## **2 Scope, assumptions and limitations**

### **2.1 Sound and vibration sensitive receptors**

2.1.1 Within the Camden Town and HS1 Link area, 165 assessment locations have been defined to represent all identified sound and vibration sensitive receptors within the spatial scope. The assessment locations are shown on the detailed maps in the Map Series SV-03 and SV-04 (Volume 5, Sound Noise and Vibration Map Book). Within this area, the following types of sound and vibration sensitive receptors have been identified:

- residential areas;
- education facilities;
- community centres and meeting facilities;
- places of worship; and
- healthcare facilities.

### **2.2 Local engagement**

- 2.2.1 Discussions have been held with representatives of London Borough of Camden regarding the approach which has been taken to baseline monitoring within this area, the identification of noise and vibration sensitive receptors, the selection of assessment location and baseline sound levels at these assessment locations.
- 2.2.2 Changes suggested during these meetings have influenced the assessment locations used and the monitoring undertaken and reported in this document.
- 2.2.3 Representatives of the London Borough of Camden have been invited to attend baseline sound measurements and witness the measurement procedures used in the Council's district. However, no council officers were able to attend these invitations.
- 2.2.4 Local engagement through community forum meetings and other community groups e.g. Camden Cutting, has also provided the opportunity for local groups to suggest appropriate baseline sound monitoring locations. Any suggestions received from these groups have been considered and have influenced the monitoring undertaken and reported in this document.

### **2.3 Existing baseline sound monitoring locations**

- 2.3.1 In this area, due to limited land access, some baseline sound levels have been derived by means of extrapolation of data measured in similar locations in the area.
- 2.3.2 Maps showing the baseline sound monitoring locations and assessment locations within this area are included in the Map Series SV-03 and SV-04 (Volume 5, Sound, Noise and Vibration Map Book).

## 3 Environmental baseline

### 3.1 Existing baseline data collection methodology

- 3.1.1 The overall approach to baseline data collection for sound noise and vibration is described in Volume 5: Appendix SV-001-000.
- 3.1.2 Over the Camden Town and HS1 Link area, a large number of baseline sound measurements have been undertaken. These have been classified as follows:
- long-term measurements – unattended measurements of several days duration;
  - medium-term measurements – attended measurements of several hours duration (generally repeated at different times of day); and
  - short-term measurements – attended measurements typically of 30 minutes duration (generally repeated at different times of day).
- 3.1.3 In this CFA a total of 17 baseline measurements have been undertaken. The baseline measurements have been supplemented by prediction of the sound levels from trains on the North London Line - see section 3.2.3 for more details.
- 3.1.4 Baseline measurements within Camden Town were undertaken at various locations close to the HS1 link. In the area surrounding Royal College Street, two long-term and six short-term measurements were undertaken to provide baseline sound levels for this area.
- 3.1.5 Three short-term measurements were undertaken in the area around Kentish Town Road. Two additional short-term measurements were undertaken along Chalk Farm Road at locations where baseline sound levels were representative of those at surrounding properties.
- 3.1.6 Around the Roundhouse Theatre, three short-term measurements were undertaken in this area.

### 3.2 Existing baseline sound levels

- 3.2.1 From the measurements described in Section 3.1, baseline sound levels have been ascertained for each assessment location within this area. These levels are presented in terms of the following key sound indicators:
- For the operational sound assessment
    - $L_{pAeq,16hr}$  weekday daytime (07:00-23:00) sound pressure level;
    - $L_{pAeq,8hr}$  weekday night-time (23:00-07:00) sound pressure level;
    - arithmetic average of  $L_{pAFmax,5min}$  night-time sound pressure level; and
    - highest  $L_{pAFmax,5min}$  night-time sound pressure level.



- For the construction sound assessment
  - daytime  $L_{pAeq}$  sound pressure level (Monday to Friday 07:00-19:00; Saturday 07:00-13:00);
  - evening/weekend  $L_{pAeq}$  sound pressure level (Monday to Friday 19:00-23:00; Saturday 13:00- 23:00; Sunday 07:00 to 23:00); and
  - night-time  $L_{pAeq}$  sound pressure level (Monday to Sunday 23:00-07:00);

3.2.2 These values are presented in Table 1. The data source coding included within this table details how the baseline sound levels allocated to each assessment location have been derived. This coding is summarised in Table 2 and explained in detail in Volume 5: Appendix SV-001-000.

3.2.3 For a number of assessment locations in the vicinity of the HS1 Link (identified in Table 1 with data source coding "5,A,-,c"), noise emissions from train movements along the existing rail corridor are the dominant component of the baseline sound climate, and the worst affected part of the buildings are often the upper floors which due to the railway proximity are often inaccessible for baseline sound measurements. For these assessment locations, the baseline sound levels have been evaluated through the development of an acoustic model implementing the methodology set out in Calculation of Railway Noise (CRN)<sup>3</sup>. The model is based upon 2012 train flows and local line speeds. The model has been used to predict at all floors at the assessment locations, which has enabled the predicted data to be reviewed against the measurements obtained at ground floor level, which showed good correlation. The noise levels presented in Table 1 at these locations represent the upper floors at these locations.

3.2.4 As part of the assessment process, after the completion of the baseline sound survey, additional assessment locations were identified as part of the construction assessment. In order to minimise the risk of over estimating the baseline sound conditions at these additional assessment locations, the selected levels allocated were based on the lowest survey results measured within the Camden Town and HS1 Link area, the Primrose Hill to Kilburn (Camden) area (CFA<sub>3</sub>) and the Kilburn (Brent) to Old Oak Common area (CFA<sub>4</sub>). In Table 1, these are referred to as "precautionary construction". In a limited number of situations, where these 'precautionary' (low) baseline sound levels has led to the unrealistic identification of effects, further analysis has been undertaken and appropriate baseline sound levels allocated.

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<sup>3</sup> Department of Transport (1995), *Calculation of Railway Noise*, HMSO.

Table 1: Existing baseline sound levels

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/ weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
520515	Camden Lock Place, London	LM0074	74.8	73.1	83.9	97.2	74.6	73.0	71.6	3,A,ii,b
521054	Chalk Farm Road, London	LM0047	57.3	55.6	69.6	83.0	57.2	55.5	54.1	3,A,ii,b
524286	Delancey Street, London	LM1309	60.4	55.5	66.5	82.8	60.7	57.7	55.2	3,A,iii,b
529961	Castlehaven Road, London	LM0074	74.8	73.1	83.9	97.2	74.6	73.0	71.6	3,A,ii,b
529986	Chalk Farm Road, London	LM0074	74.8	73.1	83.9	97.2	74.6	73.0	71.6	3,A,ii,b
530427	Water Lane, London	-	63.8	56.4	87.1	87.1	63.8	60.1	56.4	5,A,-,c
530443	Kentish Town Road, London	LM0073	68.0	66.3	75.7	89.0	67.9	66.2	64.8	3,A,ii,b
530457	Camden Gardens, London	LM0072	64.8	63.1	68.3	81.6	64.7	63.0	61.6	3,A,ii,b
546701	Camden Street, London	LM0072	64.8	63.1	68.3	81.6	64.7	63.0	61.6	3,A,iii,b
546705	Prowse Place, London	-	60.0	57.7	66.9	80.3	60.0	58.1	56.2	5,A,-,c
546786	Camden Gardens, London	LM0072	64.8	63.1	68.3	81.6	64.7	63.0	61.6	3,A,ii,b
700000	Regents Park Road, London	LM0047	57.3	55.6	69.6	83.0	57.2	55.5	54.1	3,A,ii,b
700003	Juniper Crescent, London	-	61.4	55.6	69.6	83.0	61.4	57.8	54.1	5,A,-,c
700004	Juniper Crescent, London	-	62.4	55.6	69.6	83.0	62.4	58.3	54.1	5,A,-,c
700005	Juniper Crescent, London	-	62.1	55.6	69.6	83.0	62.1	58.1	54.1	5,A,-,c

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700006	Camden Street, London	-	64.0	57.7	66.9	80.3	64.0	60.1	56.2	5,A <sub>r</sub> -,c
700007	Ivor Street, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A <sub>i</sub> iii,b
700008	Ivor Street, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A <sub>i</sub> iii,b
700009	Royal College Street, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A <sub>i</sub> iii,b
700010	Royal College Street, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A <sub>i</sub> iii,b
700011	Camden Road, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A <sub>i</sub> i,a
700012	Rousden Street, London	-	59.6	52.3	87.1	87.1	59.6	56.0	52.3	5,A <sub>r</sub> -,c
700013	Royal College Street, London	-	60.0	57.7	66.9	80.3	60.0	58.1	56.2	5,A <sub>r</sub> -,c
700014	Baynes Street, London	LM0064	63.3	61.6	72.8	86.2	64.1	62.4	61.0	3,A <sub>i</sub> ii,b
700015	Baynes Street, London	-	64.4	57.1	87.1	87.1	64.4	60.8	57.1	5,A <sub>r</sub> -,c
700016	Randolph Street, London	-	54.3	49.6	87.1	87.1	54.3	52.0	49.6	5,A <sub>r</sub> -,c
700017	St. Pancras Way, London	-	58.5	51.2	87.1	87.1	58.5	54.9	51.2	5,A <sub>r</sub> -,c
700018	Baynes Street, London	LM0068	68.7	66.0	76.4	90.6	68.3	68.4	64.5	3,A <sub>i</sub> ii,b
700019	Wrotham Road, London	-	59.8	52.5	87.1	87.1	59.8	56.2	52.5	5,A <sub>r</sub> -,c
700020	Barker Drive, London	LM0069	66.8	64.1	76.7	90.9	66.4	66.5	62.6	3,A <sub>i</sub> i,a
700021	Agar Place, London	LM0062	50.1	47.4	56.0	70.2	49.9	50.0	46.1	1,A <sub>i</sub> ii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/ weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700022	Wrotham Road, London	LM0062	50.1	47.4	56.0	70.2	49.9	50.0	46.1	1,A,ii,b
700023	Barker Drive, London	-	52.1	49.6	87.1	87.1	52.1	50.9	49.6	5,A,-,c
700024	Barker Drive, London	-	54.0	49.6	87.1	87.1	54.0	51.8	49.6	5,A,-,c
700025	Wrotham Road, London	-	55.3	49.6	87.1	87.1	55.3	52.5	49.6	5,A,-,c
700026	Barker Drive, London	-	54.5	49.6	87.1	87.1	54.5	52.1	49.6	5,A,-,c
700027	St. Pauls Crescent, London	-	58.0	50.7	87.1	87.1	58.0	54.4	50.7	5,A,-,c
700028	Maiden Lane, London	-	58.6	51.3	87.1	87.1	58.6	55.0	51.3	5,A,-,c
700029	Allensbury Place, London	-	57.9	50.6	87.1	87.1	57.9	54.3	50.6	5,A,-,c
700030	Rufford Street, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,ii,b
700031	Rufford Street, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,ii,b
700032	Juniper Crescent, London	-	66.0	58.6	87.1	87.1	66.0	62.3	58.6	5,A,-,c
700033	Juniper Crescent, London	LM0080	57.8	56.1	65.3	78.6	57.3	55.6	54.2	3,A,ii,b
700035	Chalk Farm Road, London	LM0074	74.8	73.1	83.9	97.2	74.6	73.0	71.6	3,A,ii,b
700036	Castlehaven Road, London	LM0074	74.8	73.1	83.9	97.2	74.6	73.0	71.6	3,A,ii,b
700037	Castlehaven Road, London	LM0074	74.8	73.1	83.9	97.2	74.6	73.0	71.6	3,A,iii,b
700038	Hawley Crescent, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700039	Castlehaven Road, London	-	64.0	56.0	68.0	83.0	64.0	59.2	54.4	5,A,-,c
700040	Hawley Road, London	LM1317	59.4	56.0	68.0	83.0	59.4	57.4	54.4	3,A,iii,b
700041	Kentish Town Road, London	LM0073	68.0	66.3	75.7	89.0	67.9	66.2	64.8	3,A,ii,b
700042	Kentish Town Road, London	LM0073	68.0	66.3	75.7	89.0	67.9	66.2	64.8	3,A,ii,b
700043	Bonny Street, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700083	Chalk Farm Road, London	LM0075	72.3	70.6	77.2	90.5	72.2	70.5	69.1	3,A,ii,b
700131	Gilbeys Yard, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700132	Gilbeys Yard, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700133	Oval Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700134	Oval Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700135	Oval Road, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700136	Gloucester Crescent, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700143	Parkway, Camden Town With Primrose Hill	LM0067	65.8	64.1	73.6	86.9	65.7	64.0	62.6	2,A,iii,b
700144	Parkway, London	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b
700145	Buck Street, London	LM0067	65.8	64.1	73.6	86.9	65.7	64.0	62.6	2,A,iii,b
700146	Hawley Crescent, London	LM0067	65.8	64.1	73.6	86.9	65.7	64.0	62.6	2,A,iii,b

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			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700148	Hawley Road, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700157	Castlehaven Road, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700158	Castlehaven Road, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700160	Kentish Town Road, London	LM0073	68.0	66.3	75.7	89.0	67.9	66.2	64.8	3,A,ii,b
700167	Hartland Road, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700169	Camden Road, London	LM0071	67.3	65.6	71.7	85.0	67.2	65.5	64.1	3,A,iii,b
700175	Camden Street, London	LM0067	65.8	64.1	73.6	86.9	65.7	64.0	62.6	2,A,iii,b
700178	Royal College Street, London	LM0065	69.4	67.8	76.3	89.7	69.5	67.8	66.4	3,A,i,a
700179	Royal College Street, London	LM0071	67.3	65.6	71.7	85.0	67.2	65.5	64.1	3,A,ii,b
700180	Camden Road, London	LM0068	68.7	66.0	76.4	90.6	68.3	68.4	64.5	3,A,iii,b
700181	Lyme Street, London	LM0068	68.7	66.0	76.4	90.6	68.3	68.4	64.5	3,A,iii,b
700182	Jamestown Road, London	LM0075	72.3	70.6	77.2	90.5	72.2	70.5	69.1	3,A,iii,b
700185	Royal College Street, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700186	Pratt Street, London	LM0069	66.8	64.1	76.7	90.9	66.4	66.5	62.6	3,A,ii,b
700193	Royal College Street, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A,iii,b
700194	Rochester Mews, London	LM0062	50.1	47.4	56.0	70.2	49.9	50.0	46.1	1,A,iii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/ weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700195	St. Pancras Way, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A,iii,b
700196	Jeffreys Street, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700198	Jeffreys Place, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700199	Royal College Street, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A,iii,b
700200	Farrier Street, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700201	Royal College Street, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A,iii,b
700203	Rochester Place, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700206	Kentish Town Road, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A,iii,b
700207	Rochester Road, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700210	Bartholomew Road, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700211	Bartholomew Road, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700212	Camden Road, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A,iii,b
700214	Camden Road, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A,iii,b
700215	St. Pancras Way, London	LM0069	66.8	64.1	76.7	90.9	66.4	66.5	62.6	3,A,ii,b
700216	Rochester Square, Cantelowes	LM0064	63.3	61.6	72.8	86.2	64.1	62.4	61.0	3,A,iii,b
700217	Rochester Square, London	LM0062	50.1	47.4	56.0	70.2	49.9	50.0	46.1	1,A,iii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700218	Rochester Square, London	LM0062	50.1	47.4	56.0	70.2	49.9	50.0	46.1	1,A,iii,b
700219	Agar Grove, London	LM0064	63.3	61.6	72.8	86.2	64.1	62.4	61.0	3,A,ii,b
700223	Murray Street, London	LM0062	50.1	47.4	56.0	70.2	49.9	50.0	46.1	1,A,iii,b
700225	St. Augustines Road, London	LM0062	50.1	47.4	56.0	70.2	49.9	50.0	46.1	1,A,ii,b
700228	Agar Grove, London	LM0064	63.3	61.6	72.8	86.2	64.1	62.4	61.0	3,A,ii,b
700232	Agar Grove, London	LM0062	50.1	47.4	56.0	70.2	49.9	50.0	46.1	1,A,ii,b
700234	Agar Grove, London	LM0062	50.1	47.4	56.0	70.2	49.9	50.0	46.1	1,A,ii,b
700236	Springbank Walk, London	LM0069	66.8	64.1	76.7	90.9	66.4	66.5	62.6	3,A,iii,b
700237	Springbank Walk, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700238	Linkwood Walk, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700239	St. Pauls Mews, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700240	St. Pauls Mews, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700243	Maiden Lane, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700244	Broadfield Lane, London	LM0069	66.8	64.1	76.7	90.9	66.4	66.5	62.6	3,A,iii,b
700245	Elm Friars Walk, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700248	St. Pancras Way, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b



Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700250	Bergholt Mews, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700251	Weavers Way, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700252	Crofters Way, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700253	Crofters Way, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700254	Randells Road, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,i,a
700255	Wheeler Gardens, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700257	Bingfield Street, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700258	Wellington Square, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700260	Cowdenbeath Path, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700261	Earlsferry Way, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700262	Tayport Close, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700263	Carnoustie Drive, Caledonian	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700265	Outram Place, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700266	York Way, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700267	Gifford Street, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700396	Agar Grove, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/ weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
700397	Camden Road, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A,ii,b
700398	Camden Street, London	LM0073	68.0	66.3	75.7	89.0	67.9	66.2	64.8	3,A,iii,b
700399	Kentish Town Road, London	LM0073	64.0	60.3	75.7	89.0	64.0	60.2	58.8	3,D,ii,b
700400	Torbay Street, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,iii,b
700401	Juniper Crescent, London	LM0080	57.8	56.1	65.3	78.6	57.3	55.6	54.2	3,A,ii,b
700402	Regents Park Road, London	LM0080	57.8	56.1	65.3	78.6	57.3	55.6	54.2	3,A,ii,b
709508	Georgiana Street, London	LM0068	68.7	66.0	76.4	90.6	68.3	68.4	64.5	3,A,ii,b
709509	Bartholomew Road, London	LM0063	59.4	57.7	66.9	80.3	59.3	57.6	56.2	1,A,ii,b
709510	Prince Of Wales Road, London	LM0070	71.4	69.7	74.6	87.9	71.3	69.6	68.2	3,A,ii,b
710961	Arlington Road, London	LM1075	55.2	46.7	50.8	70.6	55.5	63.6	46.3	1,B,iii,b
710963	Camden High Street, London	LM0059	59.1	53.6	67.9	83.1	59.1	57.3	52.6	3,A,iii,b
711006	Committed Development LBIS-M14	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,ii,b
711020	Committed Development C251-CM307 and LBCM-M19	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,ii,b
711021	Committed Development C251-CM258	LM1314	54.4	46.3	59.2	64.0	55.0	52.1	46.3	3,C,iii,b
711022	Committed Development LBIS-M13	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
711023	Committed Development C251-CM140	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720234	Castlehaven Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720235	Hawley Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720236	Juniper Crescent, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720237	Chalk Farm Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720238	Juniper Crescent, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720239	Juniper Crescent, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720240	Castlehaven Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720241	Cedar Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720242	Agar Grove, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720243	St. Pancras Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720244	St. Pancras Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720245	St. Pancras Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720246	Agar Grove, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720247	Wrotham Road, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720248	Agar Grove, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720249	Barker Drive, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720250	Agar Grove, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720251	Cedar Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720252	St. Pancras Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
720253	St. Pancras Way, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding
			For operational sound assessment				For construction sound assessment			
			Daytime L <sub>pAeq,16hr</sub>	Night-time L <sub>pAeq,8hr</sub>	Arithmetic average of night-time L <sub>pAFmax,5min</sub>	Highest night-time L <sub>pAFmax,5min</sub>	Daytime L <sub>pAeq</sub>	Evening/ weekend L <sub>pAeq</sub>	Night-time L <sub>pAeq</sub>	
720254	Camden High Street, London	Precautionary construction	47.0	42.0	N/A	N/A	47.0	42.0	42.0	7,A,iii,b
898989	Albert Street, London	LM1075	50.2	41.7	50.8	70.6	50.5	58.6	41.3	1,A,ii,b

Table 2: Data source coding key

Code	Data source type
1	Long-term measurement location
2	Short-term (linked to simultaneous long-term)
3	Short-term (using profile from non-simultaneous long-term)
4	Short-term using standard (National Noise Incidence Study <sup>4</sup> or other) 24hr profile
5	Specific validated prediction
6	Predictions from other sources (Department of Environment, Food and Rural Affairs (Defra) noise maps <sup>5</sup> , etc.)
7	Generic levels

  

Code	Corrections applied
A	Data from above source applied directly
B	Correction applied for screening
C	Correction applied for distance from source
D	Minimum level cut-off applied

  

Code	Distance from measurement
i	Data applied from a measurement at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.

  

Code	Uncertainty
a	Data are considered highly representative of the prevailing sound climate.
b	Data are considered representative of the prevailing sound climate, but variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate, (e.g. taken from Defra noise maps, etc.).

<sup>4</sup> Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

<sup>5</sup> Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013.

### 3.3 Future baseline methodology

#### Construction

- 3.3.1 The assessment of noise from construction activities assumes a baseline year of 2017. As a conservative assumption, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017.
- 3.3.2 Due to the duration of the construction work and as the precise timing of the highest sound levels would be different in each location, using baseline sound levels for 2017 as the start of the construction period, provides a reasonable worst case assessment.
- 3.3.3 The assessment of construction traffic is based on future baseline traffic flows for 2021, as a year representative of the middle of the construction period.

#### Operation

- 3.3.4 There is potential for future baseline sound levels for operation (2026) to change when compared to the existing baseline sound levels (2012) as a result of changes in baseline sound sources.
- 3.3.5 In the vast majority of cases where change might occur it is expected that baseline sound levels will increase at assessment locations due to increases in vehicle movements on roads. It is therefore considered that the use of the 2012 baseline levels in the operational assessment will result in a worst case assessment of the impact of changes in the future baseline sound levels in the majority of locations.
- 3.3.6 Therefore for the purposes of this assessment future baseline levels have been assumed to be identical to those identified in Table 1 for 2012.
- 3.3.7 In addition, based on available road traffic information a screening exercise has been undertaken to identify any areas in which a reduction in baseline sound level might be likely. Where reductions in baseline sound level have been identified a further screening assessment has been completed to identify if these changes would be likely to materially affect the operational sound assessment.
- 3.3.8 The screening assessment has not identified any locations in this area where a decrease in future baseline, (2026) compared to existing baseline (2012), is likely to materially affect the operational sound assessment.

## 4 References

Building Research Establishment (2002), *National Noise Incidence Study*, 2000/2001.

Defra; Noise Mapping England; <http://services.defra.gov.uk/wps/portal/noise/>; Accessed: 26 July 2013

Department of Transport (1995), *Calculation of Railway Noise*, Her Majesty's Stationery Office.